

**Pandemic Incident
Incident Annex I
Colorado State Emergency Operations Plan**

Lead Division: Colorado Department of Public Health and Environment

Supporting Agencies: American Red Cross, Colorado Voluntary Organizations Active in Disaster, Department of Agriculture, Department of Higher Education, Department of Human Services, Department of Military and Veteran Affairs, Department of Personnel Services, Department of Policy and Finance, Department of Public Safety, Department of Transportation, Department of Wildlife, Division of Emergency Management, and Salvation Army,

I. Purpose

- A. The Pandemic Influenza Annex to the State Emergency Operation Plan establishes the strategy for implementing and coordinating response actions and outlines roles and responsibilities to an influenza pandemic with the overall goal of reducing mortality and morbidity and minimizing social disruption in Colorado.
- B. An operationally specific Pandemic Influenza Plan exists within the Coordinating Agency portion in the Colorado Department of Public Health and Environment's (CDPHE) Internal Emergency Response Plan.

II. Scope

- A. The response to a pandemic influenza event will follow many of the same steps as a response to other communicable disease outbreaks. Therefore, this incident-specific annex highlights areas that are specific to pandemic influenza and require additional consideration.
- B. Colorado's definition of a Pandemic Influenza event follows the Centers for Disease Control and Prevention (CDC) definition, which states: "a novel strain of influenza virus emerges that has the ability to infect and be passed efficiently between humans. Because humans have little immunity to the new virus, a worldwide epidemic (pandemic) can ensue." An influenza pandemic requires planning and coordination at all levels of government because it has the potential to result in extraordinary levels of mass casualties, disruption in critical infrastructure and the economy, public morale, and/or government functions. An influenza pandemic could result in sustained impacts over a prolonged period of time; almost immediately exceeds resources normally available to State, local, tribal, and private-sector authorities; and significantly interrupt governmental operations and emergency services to such an extent that national security could be threatened.

- C. The Colorado's broad objectives in responding to an influenza pandemic are:
1. Detect the event through disease surveillance and environmental monitoring;
 2. Identify and protect the population(s) at risk;
 3. Determine the source of the outbreak;
 4. Quickly frame the public health and law enforcement implications;
 5. Control and contain any possible epidemic (including providing guidance to local public health agencies);
 6. Augment and surge public health and medical services;
 7. Track and prevent any potential resurgence and additional outbreaks; and
 8. Assess the extent of residual biological contamination and decontaminate as necessary.
- D. The response relationship of the World Health Organization (WHO), in association with the U.S. Department of Health and Human Services (HHS) with the State of Colorado is outlined in the context of Colorado's response to an influenza pandemic.

III. Key Concepts

The key concept of this annex is to provide a systematic and coordinated response to a pandemic influenza event at the State and local level. The elements involved are: incident reporting and investigation; appropriate mobilization and response for the level of threat; and, coordinated communication for alerts, notifications and education.

IV. Legal Authority

- A. CDPHE and local public health agencies (LPHA) have statutory authority to investigate and control causes of epidemic and communicable diseases affecting the public health in Colorado.
- B. The Colorado Board of Health has the authority to require reports of such diseases to public health officials and public health officials in turn have access to medical records relating to these diseases.
- C. CDPHE and LPHAs have statutory authority to establish, maintain and enforce isolation and quarantine and to exercise physical control over property and the persons within Colorado in response to disease events.
- D. The Governor's Expert Emergency Epidemic Response Committee (GEEERC). The GEEERC was statutorily created in 2000 to develop a public health response to acts of bioterrorism, pandemic influenza and

epidemics caused by novel and highly fatal infectious agents. It is chaired by the CDPHE Executive Director and consists of 18 other statutorily designated people representing state agencies, public health officials, various health care professions and the Attorney General. The basic function of the GEEERC is to provide recommendations to the Governor of Colorado on reasonable and appropriate measures to reduce or prevent the spreading of disease.

- E. As the Governor of Colorado has broad powers to meet the response needs of an emergency, the Governor may suspend any regulatory statute provisions, state agency orders, rules, or regulations that would prevent, hinder, or delay emergency response efforts. Based on this authority, the GEEERC has created several draft executive orders that could be signed by the Governor in order to facilitate response to a public health emergency.

V. Assumptions

Several features set pandemic influenza apart from other public health emergencies or community disasters. The following assumptions are made for such events:

- A. It is assumed that this would be the same for a pandemic influenza virus. The typical interval between infection and onset of symptoms (incubation period) for influenza is two days. Susceptibility to the pandemic influenza virus strain will be universal. Persons who become ill may shed and can transmit infection for up to one day before the onset of illness and transmission is greatest during the first two days of illness. On average, infected persons will transmit the infection to two other people; children usually shed a larger amount of virus and are likely to pose the greatest risk to transmit the virus to others.
- B. A pandemic influenza event is expected to have two waves, with each wave lasting six to eight weeks. The seasonality of a pandemic cannot be predicted with certainty but illness is expected to occur simultaneously throughout much of the U.S., preventing shifts in the human and material resources that usually exist in response to other disasters.
- C. The clinical disease attack rate will be about 30% in the overall population, with the highest among school-age children (approximately 40%) and declining with age. Healthcare workers, public health workers, and other responders (i.e., law enforcement and fire fighters) may be at higher risk of exposure and illness than the general population.
- D. The fatality rate may be 0.2 percent to 2.0 percent of those infected.

- E. An average of 20% of working adults will become ill, potentially reaching 40% at the peak of the pandemic. Of those who become ill, approximately 50% will seek outpatient medical care. The number of hospitalizations and deaths will depend on the virulence of the pandemic virus.
- F. Based on the above extrapolation for a severe pandemic, Colorado deaths for a pandemic influenza event are estimated to be approximately 29,956. The current average daily death rate in Colorado will increase from 80 per day to 347 per day. However, the death rate in Colorado will likely be smaller at the onset of the illness wave, rise steeply as the illness wave peaks and decrease at the end of the wave, modifying the daily rate slightly for the duration of each pandemic influenza event wave.
- G. Communities must be prepared to rely on their own resources to respond to a pandemic influenza event. Effective prevention and therapeutic measures such as vaccine and antiviral agents may be delayed and, initially in short supply or not available.
- H. Substantial public education regarding the need to target priority groups for vaccination and possibly for antiviral medication, and rationing of limited supplies is paramount to controlling public panic.
- I. Adequate security measures must be in place while distributing limited supplies of vaccine or antiviral medication.
- J. Note: Estimates are based on extrapolation from past pandemics in the United States using Colorado-specific census data in the Centers for Disease Control and Prevention (CDC).

VI. Concept of Operations

A. General

1. Planning for a pandemic influenza event is ongoing in the State of Colorado. The coordination between public health, healthcare providers, emergency management, agriculture, mental health, military, education, businesses, etc will contribute to an effective implementation of response activities, the delivery of health care, communications / notification and education.
2. Response to a pandemic will require an expansion of ongoing disease control activities and functions within the public health and medical communities.

3. Response is specific to the level of threat, following the WHO and HHS defined pandemic influenza threat levels. Each response level involves the activation of the following areas:
 - a. Planning and Coordination;
 - b. Surveillance, Investigation, and Protective Public Health Measures;
 - c. Vaccines and antiviral drugs;
 - d. Healthcare and emergency response;
 - e. Communications and outreach.

4. The levels of threat and general response is defined as follows:
 - a. Inter-pandemic Period – HHS Stage 0
 - (1) WHO Phase 1:
 - (a) No new influenza virus subtypes detected in humans but an influenza virus subtype may cause human infection and could be present in animals.
 - (b) Action – Standard influenza pandemic planning and surveillance at the State, regional and local levels is occurring.
 - (2) WHO Phase 2:
 - (a) No new influenza virus subtypes detected in humans, however, a circulating animal influenza virus subtype poses a substantial risk of human disease.
 - (b) Action – Standard influenza pandemic planning and surveillance occurs. Monitoring the risk of transmission to human begins. Reporting of pandemic-related information to public and partners, as appropriate occurs.
 - b. Pandemic Alert Period – HHS Stage 0 or 1 (novel strain overseas)
 - (1) WHO Phase 3:
 - (a) Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact.
 - (b) Action – Ensure rapid detection, notification and response for the first travel-related case of novel influenza in Colorado. Educate and train health professionals and the public regarding pandemic preparedness activities, realistic expectations of public health and actions they can take as the pandemic progresses.

- c. Pandemic Alert Period – HHS Stage 2 (limited human cases overseas)
 - (1) WHO Phase 4:
 - (a) Small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans.
 - (b) Action – Continue to ensure rapid detection, notification and response for the first travel-related case of novel influenza in Colorado. Continue to educate and train health professionals and the public regarding pandemic preparedness activities, realistic expectations of public health and actions they can take if the pandemic progresses.
- d. Pandemic Alert Period – HHS Stage 2 (large clusters overseas)
 - (1) WHO Phase 5:
 - (a) Larger cluster(s) but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).
 - (b) Action – Maximize efforts to detect the first travel-related case of novel influenza virus in the State. Exercise preparedness plans to ensure readiness. Emphasize education on the measures to contain or delay spread to possibly avert a pandemic, and to possibly gain time to implement pandemic response measures.
- e. Pandemic Alert Period – HHS Stage 3 (widespread human outbreaks overseas)
 - (1) WHO Phase 6:
 - (a) Pandemic increased and sustained transmission in general population.
 - (b) Action – Minimize the impact of the pandemic by continuing with Phase 5 activities.
- f. Pandemic Period – HHS Stage 4 (first case in North America) and Stage 5 (spread throughout the U.S.)
 - (1) WHO Phase 6:
 - (a) Pandemic increased and sustained transmission in the general population.

- (b) Action – Minimize the impact of the pandemic by enhancing phase 5 activities and potentially activating additional disease control measures, as determined by the GEERC.
- g. Pandemic Period – HHS Stage 6 (between pandemic waves)
 - (1) WHO Phase 6:
 - (a) Between pandemic waves or beginning of recovery. Preparation for subsequent waves should occur.
 - (b) Action – Prepare for subsequent waves or begin recovery.
- 5. When CDPHE activates response activities, specific administrative and financial tasks will occur, in accordance with the State of Colorado fiscal requirements and the U.S. Federal Emergency Management Agency requirements.

VII. Ongoing Plan Management and Maintenance

CDPHE's Internal Pandemic Influenza Plan is reviewed no less than once per year and as frequently as necessary, based on exercises within Colorado and current information and guidance from WHO, HHS, and CDC. Appropriate revisions to this annex will subsequently occur.